

What Is Claimed Is:

1. A liquid atomizer comprising a housing fitted with an inlet for connecting to a liquid supply line and a cavity being in flow communication with the inlet, said cavity having a longitudinal axis;

the housing being formed with at least one outlet nozzle for emitting atomized liquid;

a vortex generating member, which is concentrically receivable within the housing, said vortex generating member being provided with at least one depression constituting at least one vortex generating path defined by a vortex generating portion and by a duct portion, the arrangement being such that when said vortex generating member is received within the housing, the vortex generating portion is disposed opposite a respective outlet nozzle of the housing and the duct portion is brought in flow communication with the cavity;

said duct portion extending essentially along the longitudinal axis of the cavity and encountering said vortex generating portion essentially tangentially; and

each of at least one vortex-generating path generates a liquid vortex about an axis transversally extending relative to the longitudinal axis of the housing.

2. A liquid atomizer according to Claim 1, wherein said vortex generating member is secured within the housing with possibility for indexing thereof at a radial angle.

3. A liquid atomizer according to claim 1, wherein the vortex generating member is coaxially and sealingly received within the housing.

4. A liquid atomizer according to claim 3, wherein the vortex generating member is snapingly fixed to the housing.

5. A liquid atomizer according to Claim 3, wherein outwardly facing walls of the vortex generating member sealingly bear against inwardly facing walls of the housing.

6. A liquid atomizer according to claim 3, wherein the housing and the vortex generating member are cylindrical.

7. A liquid atomizer according to claim 1, wherein the vortex generating path generates a liquid vortex about an axis substantially perpendicular to the longitudinal axis of the housing

8. A liquid atomizer according to claim 1, in which the duct portion of the vortex-generating path is provided with an inlet for flow communication with the cavity, wherein

the inlet originates immediately at an edge of the vortex-generating member.

9. A liquid atomizer according to claim 1, wherein the duct portion of the vortex generating path is provided with a bore for flow communication with the cavity.

10. A liquid atomizer according to Claim 1, wherein the vortex generating portion has a cochlea-shaped configuration.

11. A liquid atomizer according to claim 1, wherein each housing is fitted with a single vortex generating member.

12. A liquid atomizer according to claim 1, comprising only a single housing and a single vortex generating member.

13. A liquid atomizer according to Claim 1, wherein the inlet of the housing is in flow communication with a pressure threshold valve.

14. A liquid atomizer according to Claim 16, wherein the pressure threshold valve is received within the cavity.

15. A liquid atomizer according to claim 13, wherein the pressure threshold valve comprises a closure member biased against the inlet of the housing.

16. A liquid atomizer according to claim 1, wherein the vortex generating member is adapted to be snugly received within the cavity.

17. A liquid atomizer according to Claim 15, wherein the piston is sealingly displaceable within a cylinder located within the cavity, and said piston is displaceable by liquid entering the cavity and applying force on the piston in a direction entailing displacement of the closure member away from the inlet of the housing.

18. A liquid atomizer according to Claim 14, wherein the piston is displaceable together with the closure member connected to an end of the piston rod.

19. A liquid atomizer comprising a housing fitted with an inlet for connecting to a liquid supply line and a cavity being in flow communication with the inlet, said cavity having a longitudinal axis;

the housing being formed with at least one outlet nozzle for emitting atomized liquid;

a vortex generating member received within the housing and integrally formed with at least one vortex

generating path, each having a vortex generating portion extending opposite a respective outlet nozzle, and being in flow communication with the cavity via a duct portion extending between an inlet to said duct and said vortex generating portion;

said duct encountering said vortex generating portion essentially tangentially;

each of at least one vortex-generating path generates a liquid vortex about an axis transversally extending relative to the longitudinal axis of the housing;

wherein the inlet is in flow communication with a pressure threshold valve, and

wherein the pressure threshold valve is a leakage preventing device (LPD), and wherein the closure member is spring biased against the inlet of the housing and has a piston rod connecting it with a piston, said piston being displaceable along a corresponding cylinder and being in flow communication with the cavity, and

wherein the piston is sealingly displaceable within a cylinder located within the cavity, and said piston is displaceable by liquid entering the cavity and applying force on the piston in a direction entailing displacement of the closure member away from the inlet of the housing..

20. A liquid atomizer comprising a housing fitted with an inlet for connecting to a liquid supply line and a cavity being in flow communication with the inlet, said cavity having a longitudinal axis;

the housing being formed with at least one outlet nozzle for emitting atomized liquid;

a vortex generating member received within the housing and integrally formed with at least one vortex generating path, each having a vortex generating portion extending opposite a respective outlet nozzle, and being in flow communication with the cavity via a duct portion extending between an inlet to said duct and said vortex generating portion;

said duct encountering said vortex generating portion essentially tangentially;

each of at least one vortex-generating path generates a liquid vortex about an axis transversally extending relative to the longitudinal axis of the housing;

wherein the inlet is in flow communication with a pressure threshold valve, and

wherein the pressure threshold valve is a leakage preventing device (LPD), and wherein the closure member is spring biased against the inlet of the housing and has a piston rod connecting it with a piston, said piston being

displaceable along a corresponding cylinder and being in flow communication with the cavity, and

wherein the piston is displaceable together with the closure member connected to an end of the piston rod.